How to improve the modeling of world sugar markets

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Priority and objective

• Priority: International Trade in Biorenewables and associated feedstock

• Issue: How changes in world sugar markets affect the competitiveness of Brazil as the supplier of low-cost low-carbon ethanol and sugar to the rest of the world

• Overall objective: enhance outlook and policy analysis expertise on world sugar markets
  • Better prediction of foreign supply demand faced by Brazil, hence the sugar-biofuel mix produced by Brazil
Objective of this very proposal

- A building block of the overall objective, along with proposed Brazilian sugar modeling efforts
- Focus on qualitative assessment of market and policy conditions in key sugar markets (EU, Australia, India, South Africa) leading to improvements to world sugar modeling (beyond Brazil)
- To be integrated in BIC/CARD biofuel-feedstock model
- Qualitative means fact-based analytical assessment. Directly leading to building blocks in models
Motivations

- CARD-FAPRI sugar model useful to keep track of sugar balances (supply, use, stocks) and for rough estimates of supply and demand conditions in key markets

- What is new in sugar markets?
  - High sugar price environment and volatility
  - The expansion of sugar growing and processing capacity induced by high price environment and last EU rationalization
What is new in sugar markets

- High current and foreseen sugar price environment (twice that of 2000) from link to energy markets and EU policy changes

- Thinness of market exacerbated by policy changes (EU & India in particular)
  - EU: from large exports to large imports (5 mmt output reduction)
  - India: pro-cyclical policies rattle world markets

- The expansion of sugar growing and processing capacity induced by high price environment (Russia, proposed EU abolition of output quotas in 2015). At 20-25 cents/lb many producers are competitive (below 10 cents in late 1990s-early 2000s). What will happen?
High sugar price environment

world raw sugar price (cents/lb)
Projected to continue

world sugar price in cents/lb (actual+projected)
EU trade pattern reversal

EU sugar net imports in 1000 mts (actual and projected)

End of current policy in 2015
Indian pro-cyclical policies
Approach

1. Collect market intelligence + data on sugar (and biofuel) markets: supply conditions, current + older/idled capacity, demand for sugar, policy developments for Australia, China, India, the EU

2. Translate step 1 into implementable modeling developments and improvements into the existing international partial equilibrium sugar model.

Division of labor: PI Beghin in charge of 1 and 2 and identifies model developments. Co-PI Babcock evaluates and prioritizes them into a sequence and coordinate with complementary efforts on Brazilian model
Work plan

1. June-August. EU and Australia market assessments. For the EU, focus on trade from ACP countries, impact of sugar reforms on supply on sugar markets. For Australia, focus on capacity, yield and weather, and new bio-energy policies.

2. September. Travel to France to work with Gohin and Bureau on identifying potential collaboration and use their expertise to check proposed model developments.

3. December-January. Continuation of the market assessment: India. Focus on policy response to price and weather shock and their procyclical effects. Price transmission from border to local sugar markets.

4. February-March. Assessment of Chinese markets; focus on demand developments (urbanization, diets, income).

5. April-May. Identification of implementable model improvements and sequencing.
## Budget

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<tr>
<th>CATEGORY</th>
<th>AMT REQUESTED</th>
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<tr>
<td>Salaries (1 month for PI)</td>
<td>$15,776</td>
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<td>Benefits</td>
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<td>Sub-total for labor</td>
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<td>Travel to France (PI and co-PI)</td>
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<td>Honoraria Bureau &amp; Gohin ($2,000 each)</td>
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<td>TOTAL</td>
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